

**From:** [Soave, Melissa](#)  
**To:** [Soave, Melissa](#)  
**Subject:** FW: Geography PhD semester conversion proposal questions  
**Date:** Friday, July 22, 2011 2:25:47 PM  
**Attachments:** [PhD attachment 072211.docx](#)  
[Quarter Advising Sheet PhD 071511.docx](#)

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**From:** Juliana Pernik [pernik.2@osu.edu]  
**Sent:** Friday, July 22, 2011 8:06 AM  
**To:** Polivka, Barbara; 'Darla Munroe'  
**Cc:** 'Morton O'Kelly'; sui.10@osu.edu; kwan.8@osu.edu; 'Henry Zerby'; 'Marilyn Blackwell'; polivka.1@osu.edu  
**Subject:** RE: Geography PhD semester conversion proposal questions

All:

Attached is the most recent proposal (Attachment 2) as well as the quarter advising sheet.

Darla's text below "30 hours are required..." is what we intend to include under the rationale for change in credit hours.

Juliana

Juliana Pernik, MPA  
Fiscal/HR Officer  
[Department of Geography](#)  
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**From:** Polivka, Barbara [mailto:bpolivka@con.ohio-state.edu]  
**Sent:** Thursday, July 21, 2011 5:42 PM  
**To:** Darla Munroe  
**Cc:** Morton O'Kelly; sui.10@osu.edu; pernik.2@osu.edu; kwan.8@osu.edu; Henry Zerby; Marilyn Blackwell; polivka.1@osu.edu  
**Subject:** RE: Geography PhD semester conversion proposal questions

OK, please send the advising sheet and revised proposal to me. I'll forward to Melissa Soave who will post for CAA. Thanks

Barbara J. Polivka, RN, PhD  
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Program Director, Nursing and Health Systems Management  
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614-292-4902

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**From:** munroe.9@gmail.com [munroe.9@gmail.com] on behalf of Darla Munroe [munroe.9@osu.edu]  
**Sent:** Thursday, July 21, 2011 5:25 PM  
**To:** Polivka, Barbara  
**Cc:** Morton O'Kelly; sui.10@osu.edu; pernik.2@osu.edu; kwan.8@osu.edu; Henry Zerby; Marilyn Blackwell; polivka.1@osu.edu

**Subject:** Re: Geography PhD semester conversion proposal questions

Oops - forgot today was Thursday. I was thinking it was Friday.

Barbara - Juliana Pernik can send you the quarters advising sheet (within the revised proposal) and our additional explanation for the current PACER table.

In a nutshell:

30 hours are required for the MA degree, and 50 additional hours are required for the PhD degree. According to our graduate manual, students coming in with a Master's degree can petition the Graduate Studies Chair to review their transcripts and give credit for up to 30 hours (45 quarter hours) for their MA/MS coursework. In practice in recent years, most students who have earned an MA in this department or come in with an MA/MS from another department have foregone this option and completed at least 135 hours for their post-Master's coursework. Given new graduate college rules with semester conversion about the limits of post-candidacy enrollment, we propose to adjust our new semesters advising sheets to reflect the graduate manual: (1) with Graduate Studies Chair approval, students may receive up to 30 hours credit toward their PhD for MA/MS coursework; and (2) beyond these initial 30 hours, students must complete at least 50 hours toward their PhD degree.

I will be in the office tomorrow, Friday, and am happy to meet in person or talk over the phone as needed. As best as I can tell, the table should be correct in its current form.

Thanks,

Darla

On Thu, Jul 21, 2011 at 5:22 PM, Darla Munroe <[munroe.9@osu.edu](mailto:munroe.9@osu.edu)> wrote:

Dear All,

We have a revised proposal with the quarters advising sheet but Juliana has been unable to reupload it to PACER because we need the current proposal to be sent back to us.

The current table is correct. We added an additional explanation.

I'll be happy to explain all this to anyone as needed anytime Monday. Juliana Pernik has the most recent documents; I would guess she is gone for the day but can forward to Barbara via email first thing Monday.

- Darla

\*\*\*\*\*

Darla K. Munroe, PhD  
Associate Professor  
Department of Geography  
Ohio State University  
email: munroe.9 AT osu DOT edu  
phone: [\(614\) 247-8382](tel:(614)247-8382)  
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On Thu, Jul 21, 2011 at 3:36 PM, Polivka, Barbara <[bpolivka@con.ohio-state.edu](mailto:bpolivka@con.ohio-state.edu)> wrote:  
Morton and all,

Subcommittee B met today to consider the Geography PhD proposal and we still had a few questions.

1. Can someone send us the Quarter advising sheet for the PhD program?
2. The Pacer table issue is still unclear. We need a revised Pacer table. The current table remains confusing. The minimum number of credit hours for a PhD is 80 hours.
  - a. If the MA hours are counted toward the PhD those hours should not be pulled out of Column C as prerequisite credit.
  - b. Specifically – in Column A – it appears as if the 45 quarter credit hours for the MA are included both in Row 1 as well as Rows 6 & 7 while in column C the 30 hours for the MA are not included in Row 1.

Please send a corrected Pacer table (in Word or in Excel) as well as a Quarter advising sheet. CAA is meeting on Monday July 25<sup>th</sup> and I would really like to be able to present this proposal – but I'll need this information to me by Monday 7/25 in the AM.

I look forward to hearing from you

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**Error! Filename not specified.**

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**From:** Morton O'Kelly [mailto:[okelly.1@osu.edu](mailto:okelly.1@osu.edu)]  
**Sent:** Thursday, July 14, 2011 10:13 AM  
**To:** Polivka, Barbara; Polivka, Barbara; [sui.10@osu.edu](mailto:sui.10@osu.edu); Darla Munroe; [pernik.2@osu.edu](mailto:pernik.2@osu.edu); [kwan.8@osu.edu](mailto:kwan.8@osu.edu)  
**Cc:** Henry Zerby; Marilyn Blackwell; [polivka.1@osu.edu](mailto:polivka.1@osu.edu); Jay Hobgood  
**Subject:** RE: Geography PhD semester conversion proposal questions

Geography PhD semester conversion proposal questions

Reply from MOK 7/14

Added cc: I have added Dr. Mei-Po Kwan (outgoing GSC Chair); Dr. Darla Munroe to the circ. here as they are the people with direct knowledge of the transition planning. Juliana Pernik also has access to our Pacer uploads. I removed Ahlqvist from circ as that question was handled.

=====  
Barbara et al.:

Here are a couple of replies. [The quarter advising sheet for PhD students will have to come from GSC.]

At the slight risk of adding to the confusion (which I certainly don't want to do), I think I can address the 135 vs 45 hours.

Since we have an MA program, and a PhD program, there are two paths into the PhD. The student who starts here from a Bachelor's degree, does an MA and continues onto the PhD is perhaps the typical case. The 135 hours in this case are/were the required hours on quarters.

A student can also apply to the PhD with an external MA, and from my recollection as grad studies chair some years ago there is an option for the non-OSU MA to contribute 45 hours to the PhD in which case the student then needs/needed 90 hours. The GSC chair signs off on this equivalence on the admission form.

If the question is to understand what we were doing and what we plan to replace it with, the refinement in the semester version is a smaller number of hours. It was relatively easy on quarters a few years ago to accumulate these hours,... 90 hours post MA, prior to the imposition of a maximum credit hour load post candidacy. The post candidacy lowered hours has altered the expected maximum number of hours that a student can feasibly attain. This applies regardless of whether the student starts here or comes in with an MA.

**I'll be available by phone or e-mail if a conversation would help any of the parties to this clear up the concerns, [2-8744]. Dan Sui should be the point person to assure that the questions get answered and uploaded.**

Morton

At 09:51 AM 7/14/2011, Polivka, Barbara wrote:

Dr. O'Kelly and Sui,

Below is an email I sent last week requesting information/clarification about the Geography PhD. We'd appreciate a response as soon as possible so that CAA could consider this proposal in an upcoming meeting.

thanks

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**Error! Filename not specified.**

**From:** Polivka, Barbara [ <mailto:bpolivka@con.ohio-state.edu> ]  
**Sent:** Friday, July 08, 2011 11:34 AM  
**To:** Morton O'Kelly; [sui.10@osu.edu](mailto:sui.10@osu.edu); [ahlqvist.1@osu.edu](mailto:ahlqvist.1@osu.edu)  
**Cc:** Henry Zerby; Marilyn Blackwell; [polivka.1@osu.edu](mailto:polivka.1@osu.edu)  
**Subject:** RE: Geography MA semester conversion proposal questions

Morton and Dan,

Thanks for your response on the Geography MA program. Henry and I agree your responses cleared up our question. Please do incorporate these responses into the PACER document for Melissa to upload.

We reviewed the Geography PhD proposal and also had a question and a request:

1. Please include a quarter advising sheet for PhD students. You have a semester advising sheet, but not a quarter advising sheet.
2. The PACER talbe indicates the current PhD program is 135 quarter credit hours - we were very confused by this and the explanation unfortunately wasn't very helpful. Does the 135 hours include the 45 hours for the MA/MS? We see that 45 hours are included as pre-requisite (Column A) - were these hours double counted in the 135 hours? If so - please submit a corrected PACER chart. If not - please provide a more thorough explanation on this change. Thanks.

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**From:** Morton O'Kelly [[okelly.1@osu.edu](mailto:okelly.1@osu.edu)]  
**Sent:** Monday, June 27, 2011 10:18 AM  
**To:** Polivka, Barbara; [sui.10@osu.edu](mailto:sui.10@osu.edu); [ahlqvist.1@osu.edu](mailto:ahlqvist.1@osu.edu)  
**Cc:** Henry Zerby; Marilyn Blackwell  
**Subject:** Re: Geography MA semester conversion proposal questions  
To: Barbara J. Polivka, PhD, RN & Subcommittee B Members (by e-mail):  
From: Morton O'Kelly, Professor & Chair Department of Geography

Thanks for the questions (*reprinted in italics*); our replies are interspersed below.

*a. The pacer table indicates that the Analytical Cartography concentration in the GIS-SA specialty is being dropped – the rationale is that the credit hour requirement is high compared to the other concentrations. The transition plan provides no indication of what will happen with current students in this concentration as we move to semesters. Please provide more in-depth rationale for dropping this concentration and also provide a transition plan for students remaining in the concentration after the transition to semesters.*

The term Analytical Cartography was closely associated with the track advised by a retired professor. In brief, the term served as a 'brand name' in some ways for the particular sequence of classes, many of which required the professor's classes. Upon review, the current faculty agreed that the same material is contained in our new curriculum, without the need for a particular label. Thus, similar classes now are available for numerical cartography, cartography, GIScience, and related mapping courses. All students taking what would have been called AC have the equivalent, more modern, streamlined sequence in the new GIS option. (To be clear, the same options are available in the more encompassing term GIS-SA.)

The student's advisor, in consultation with the graduate studies committee, will make a case by case analysis of the students if a transition question arises. In fact, there are no students in this category at the moment.

*b. The Quantitative Methods concentration in the GIS-SA specialty - in the quarter based curriculum students it seems that students can take up to 5 cr. hrs of independent study, but in the semester curriculum students can use 9 cr. hrs of independent study to fulfill the major requirement. We'd appreciate clarification or an explanation of this change in independent study hours.*

For those students with adequate quantitative preparation, the department recognizes that they might wish to take either more external stats/methods classes, or to work with a professor on an applied research project. The 9 hours of independent study is well within the norms for a student in spatial analysis.

*Transition plan for courses that are pre-requisite to other courses:*

The Graduate Studies Committee has representation from all the major tracks in the department and Prof. Ola Ahlqvist who is very familiar with these selections (in particular in GIS) will provide guidance as needed.

=====

As you may know, I am completing my term as Chair at the end of this month. I will of course be ready and willing to continue to provide assistance to the new departmental leadership. Dr. Dan Sui ([sui.10@osu.edu](mailto:sui.10@osu.edu)) is the new chair, and he is putting in place a very capable set of committee leaders who are briefed and aware of our semester transition plans. We are excited by the opportunity to fine-tune our curriculum for semesters, but reaffirm that the changes are minor adjustments to existing programs.

Thanks, and let me know if you would like me to re-enter these replies via PACER.

MOK

Semester Program Proposal – PhD Attachment 2

To: OAA **FINAL**

Date: 6/7/2011

Cover Letter for Proposals from the Department of Geography

This is the transmittal cover letter to the Office of Academic Affairs that reflects the efforts by the Department of Geography under Quarter to Semester Conversion.

The department used a series of committee and special purpose task forces to review programs and courses. Having recently proposed substantial revisions to our majors, we were in relatively good position to begin the Q to S process.

There has been a tremendous effort to accomplish these planned changes, with commendable input from Professor Becky Mansfield (Undergraduate), Jay Hobgood (Atmospheric Science), and Darla Munroe (Graduate). The graduate level documents are still being finalized.

The department recommends approval of these changes, which by and large are converted with minimal changes to program goals and/or curricular requirements at the undergraduate level. A recently approved set of revisions to the Majors has been incorporated into our planned semester version. *[There are minimal name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content.]*

The graduate courses are minimally changed, but there is expected to be a complete re-write of our graduate manual to organize these classes in a way that conveys greater advisor flexibility. The department will seek appropriate approval for any substantive track or programs changes built around our existing graduate courses.

The following are the programs in the department:

a. Undergraduate bachelors degree programs and/or majors

1. Environment and Society (BA)
2. Climatology and Physical Geography Specialization (BS)
3. Spatial Analysis (BS)
4. Urban, Regional and Global Studies (BA)
5. Geographic Information Science (BS) Tagged Major, pending
6. Atmospheric Science (BS) Tagged Major, pending

b. Undergraduate minors

A minor in geography is available to any Arts and Sciences student who is not already majoring in geography.



Semester Program Proposal – PhD Attachment 2

A geography minor can be attained in any of the four specializations (1-4 above). A geography minor requires five courses from the appropriate specialization. The geography minor flier outlines the classes from which students can customize their minor in geography.

The omission of a matching minor for the two new majors (5-6 above) was a technical oversight and we plan to correct this once the majors themselves are approved. Even without that correction, a student wishing to minor in areas related to atmospheric science or geographic information science has similar options in cognate fields (items 2 & 3: Climatology and Physical Geography Specialization (BS) and Spatial Analysis (BS) respectively).

c. Undergraduate associate degree programs

n/a

d. Graduate degree programs

1. M.A. in Geography
2. Ph.D. in Geography
3. M.S. in Atmospheric Science
4. Ph.D. in Atmospheric Science

e. Graduate minors

n/a

f. Graduate certificate programs

n/a

g. Graduate interdisciplinary specializations

Graduate Interdisciplinary Specialization in Geo-Spatial Data Analysis.

Since the interdisciplinary specialization requires elements from many other degree programs, we plan to finalize these syllabi and arrangements after the initial round of graduate degree courses has been screened.

h. Professional degree programs

n/a

i. Combined programs (e.g., BS/MS, Ph.D./ MD)

Semester Program Proposal – PhD Attachment 2

n/a

For the record, no programs are being withdrawn. The details in the balance of the template are incorporated by reference, and are being revised to ensure technical compliance with the templates.

Thank you for attention to these proposals

Morton O'Kelly  
Professor & Chair  
Department of Geography

## **Program Rationale**

We have made minimal changes. The only changes for semesters is that Geog 8102 (Semesters) replaces Geog 883.01 and 883.02 (Quarters) and that there have been four name changes to seminar classes.

## **Contextual Narrative**

Geography admits students to the PhD with an MA. We do not admit directly into the PhD from Bachelor's degrees, though the expectation that students will progress to the PhD after an MA is very strongly imbedded in our admission criteria.

The PhD requires at least 50 hours post MA = 80 hours. A student coming in with an external MA can get a review to obtain 30 hours to count toward the PhD.

As a result of this structure, it is assumed that a student with an MA has already taken many intermediate and advanced classes and therefore, at the PhD level, has wide flexibility to select theory and methods courses to suit their particular research agenda, with the advice of a faculty member.

Feasible pathway: (post MA):

**year 1 18 semester hours**

**year 2 20 semester hours**

**CANDIDACY**

**year 3 6 semester hours**

**year 4 6 semester hours**

The hours in year 1 and 2 contain the two required classes, and the one advanced class each year, at a minimum. In year 2, students take remaining 2 credits through 8109 and/or 7193 or another option in consultation with their advisor.

The program is structured from a practical / common sense point of view and it is continuing the long standing practice of having the students, in consultation with an academic advisor, select specific classes.

Semester Program Proposal – PhD Attachment 2

**List of semester courses in the program**

Proficiency of a level equivalent to MA core is required for the PhD program. See Appendix A for details of MA coursework.

**Post-Masters Courses**

PhD Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
	Proficiency of a level equivalent to MA Core		30
<b>1. Required courses (6 hours):</b>			
	<b>8100</b>	The Development of Geographic Thought	3
	<b>8104 or equiv</b>	Special Topics in Quantitative Geography OR an advanced methods course in Geography or another unit, chosen in consultation with the adviser and approved by the GSC Chair	3
<b>2. At least one advanced course per year (12 hours):</b>			
	<b>8200</b>	Seminars in Cartography	3
	<b>8271</b>	Location Theory	3
	<b>8272</b>	Problems	3
	<b>8300</b>	Theory of Transportation Geography	3
	<b>8400</b>	Approaches and Issues in Economic Geography	3
	<b>8401</b>	Theory of Population and Social Geography	3
	<b>8402</b>	Problems in Population and Social Geography	3
	<b>8501</b>	Spatial Organization of the City	3
	<b>8502</b>	Urban Systems Analysis	3
	<b>8503</b>	Third World Urbanization	3
	<b>8601</b>	Theory of Political Geography	3
	<b>8602</b>	Problems in Political Geography	3
	<b>8800</b>	Seminar in Environment and Society	3
<b>3. One optional course (1 hour):</b>			
	<b>8109</b>	Graduate Student Professionalization	1
<b>4. Independent study and thesis courses (repeated until student reaches 50 post-masters credit hours)</b>			
	<b>7193</b>	Individual Studies in Geography	3
	<b>8999</b>	Research in Geography – Dissertation (post-candidacy)	3

Semester Program Proposal – PhD Attachment 2

**Semester Advising Sheet**

**Post-Masters Courses**

<b>Geography PhD Advising Sheet SEMESTERS</b>			
<b>Segment of Graduate Program (Semesters)</b>	<b>Semester course name</b>	<b>Units</b>	<b>Grade</b>
<b>Required Prerequisites or Supplements</b>			
Proficiency of a level equivalent to MA core		30	
<b>1. Required courses (6 hours)</b>			
<b>8100</b>	The Development of Geographic Thought	3	
<b>8104 or equivalent</b>	Special Topics in Quantitative Geography OR an advanced methods course in Geography or another unit, chosen in consultation with advisor and approved by the GSC chair.	3	
<b>2. At least one advanced course per year (12 hours)</b>			
<b>8200</b>	Seminars in Cartography	3	
<b>8271</b>	Location Theory	3	
<b>8272</b>	Problems	3	
<b>8300</b>	Theory of Transportation Geography	3	
<b>8400</b>	Approaches and Issues in Economic Geography	3	
<b>8401</b>	Theory of Population and Social Geography	3	
<b>8402</b>	Problems in Population and Social Geography	3	
<b>8501</b>	Spatial Organization of the City	3	
<b>8502</b>	Urban Systems Analysis	3	
<b>8503</b>	Third World Urbanization	3	
<b>8601</b>	Theory of Political Geography	3	
<b>8602</b>	Problems in Political Geography	3	
<b>8800</b>	Seminar in Environment and Society	3	
<b>3. One optional course (1 hour)</b>			
<b>8109</b>	Graduate Student Professionalization	1	
<b>4. Independent study and thesis courses (repeated until student reaches 50 post-masters credit hours)</b>			
<b>7193</b>	Individual Studies in Geography	3	
<b>8999</b>	Research in Geography – Dissertation (post candidacy)	3	
Advisor Signature and Date:			
Name:			
Graduate Major/Specialization:			
Campus ID:			

Semester Program Proposal – PhD Attachment 2

**Appendix A – Masters Advising Sheet (Semesters)**

Students will take these classes at OSU or demonstrate they have taken the equivalent elsewhere.

**1. MA Specialty Field: Environment and Society**

Environment & Society Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
		None	
<b>Required courses (3 hours)</b>			
	5220	Fundamentals of Geographic Information Systems	3
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (6 hours):</b>			
	5100	Quantitative Geographical Methods	3
	7101	Research Design	3
	7102	Fieldwork in Human Geography	3
	8102	Spatial Data Analysis	3
<b>2. Choice of four courses (12 hours):</b>			
	5401	Geography of Latin America	3
	5402	Globalization and Environment	3
	5402	Land Use Geography	3
	5501	Conservation of Natural Resources	3
	5602	Geography of Development	3
	5700	Newly Industrializing Countries	3
<b>3. Choice of two advanced classes (6 hours)</b>			
	8100	The Development of Geographic Thought	3
	8200	Seminars in Cartography	3
	8271	Location Theory	3
	8272	Problems	3
	8300	Theory of Transportation Geography	3
	8400	Approaches and Issues in Economic Geography	3
	8401	Theory of Population and Social Geography	3
	8402	Problems in Population and Social Geography	3
	8501	Spatial Organization of the City	3
	8502	Urban Systems Analysis	3
	8503	Third World Urbanization	3
	8601	Theory of Political Geography	3
	8602	Problems in Political Geography	3
	8800	Seminar in Environment and Society	3
<b>4. Independent Study (3 hours)</b>			
	7193	Individual studies in Geography	3
<b>5. One optional course (1 hour)</b>			
	8109	Graduate Student Professionalization	1

**2. MA Specialty Field: Urban, Regional, and Global Studies**

Semester Program Proposal – PhD Attachment 2

Urban, Regional, and Global Studies Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
		None	
<b>Required courses (3 hours)</b>			
	5220	Fundamentals of Geographic Information Systems	3
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (6 hours):</b>			
	5100	Quantitative Geographical Methods	3
	7101	Research Design	3
	7102	Fieldwork in Human Geography	3
	8102	Spatial Data Analysis	3
<b>2. Choice of two broad overview courses (6 hours):</b>			
	5401	Economies, Space and Society	3
	5402	Land Use Geography	3
	5501	Urban Spaces in the Global Economy	3
	5602	Conflict, Power, and Politics in the City	3
<b>3. Choice of two specialized courses: (6 hours)</b>			
	5271	Locational Analysis	3
	5300	Geography of Transportation	3
	5601	Geographies of Governmentalities	3
	5700	Geography of Development	3
<b>4. Choice of two advanced classes (6 hours)</b>			
	8100	The Development of Geographic Thought	3
	8200	Seminars in Cartography	3
	8271	Location Theory	3
	8272	Problems	3
	8300	Theory of Transportation Geography	3
	8400	Approaches and Issues in Economic Geography	3
	8401	Theory of Population and Social Geography	3
	8402	Problems in Population and Social Geography	3
	8501	Spatial Organization of the City	3
	8502	Urban Systems Analysis	3
	8503	Third World Urbanization	3
	8601	Theory of Political Geography	3
	8602	Problems in Political Geography	3
	8800	Seminar in Environment and Society	3
<b>5. Independent Study (3 hours)</b>			
	7193	Individual Studies in Geography	3
<b>6. One optional course (1 hour)</b>			
	8109	Graduate Student Professionalization	1

**3. MA Specialty Field: Geographic Information Systems – Spatial Analysis**

Semester Program Proposal – PhD Attachment 2

Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
	Stat 2450	Introduction to Statistical Analysis	3
<b>Required courses (6 hours)</b>			
	5220	Fundamentals of Geographic Information Systems	3
	8102	Spatial Data Analysis	3
<b>One optional course (1 hour)</b>			
	8109	Graduate Student Professionalization	1
<b>Concentrations (select one option below)</b>			
<b>1. Concentration in Geographic Information Systems</b>			
<b>Required core (12 hours)</b>			
	5221	Spatial Simulation and Modeling in GIS	3
	5222	GIS Applications in Social Science and Business	3
	5223	Design and Implementation of GIS	3
	8200	Seminars in Cartography	3
<b>Select one from the following advanced courses (3 hours)</b>			
	5224	Emerging Topics in GIS	3
	6220	Advanced Applications in Geographic Information Systems	3
<b>2. Concentration in Quantitative Methods</b>			
<b>Program of study developed in consultation with student's adviser (15 hours total)</b>			
	5200	Elements of Cartography	3
	5300	Geography of Transportation	3
	5271	Locational Analysis	3
	5201	Computer Cartography and Geographical Visualization	3
	5270	Geographical Applications of Remote Sensing	3
	5220	Fundamentals of Geographic Information Systems	3
	5221	Spatial Simulation and Modeling in GIS	3
	5222	GIS Applications in Social Science and Business	3
	5223	Design and Implementation of GIS	3
	6271	Advanced Locational Analysis	3
	6220	Advanced Applications in Geographic Information Systems	3
	8271	Location Theory	3
	8272	Problems	3
	8400	Approaches and Issues in Economic Geography	3
	8300	Seminars in Transportation Geography	3
	8501	Spatial Organization of the City	3
	8502	Urban Systems Analysis	3
	8503	Third World Urbanization	3
	8401	Theory of Population and Social Geography	3
	8402	Problems in Population and Social Geography	3
	8200	Seminars in Cartography	3



Semester Program Proposal – PhD Attachment 2

	<b>8100</b>	The Development of Geographic Thought	3
	<b>8104</b>	Special Topics in Quantitative Geography	3
	<b>CRP 6700</b>	Urban Transportation Demand Forecasting	3
	<b>CRP 6800</b>	Transportation Planning	3
	<b>CRP 6600</b>	Spatial Models and Project Evaluation	3
	<b>CE 5420</b>	Remote Sensing of Environment	3
	<b>CE 7740</b>	Urban Transport Network Analysis	3
	<b>CSE 5232</b>	Software Requirements Analysis	3
	<b>CSE 5361</b>	Numerical Methods	3
	<b>CSE 4901</b>	Project: Design, Development, and Documentation of Web Applications	4
	<b>CSE 4902</b>	Project: Design, Development, and Documentation of Interactive Systems	4
	<b>CSE 4521</b>	Survey of Artificial Intelligence for non-majors	3
	<b>CSE 5241</b>	Introduction to Database Systems	3
	<b>CSE 5331</b>	Foundations II: Data Structures and Algorithms	2
	<b>CSE 5541</b>	Computer Game and Animation Techniques	2
	<b>CSE 5522</b>	Survey of Artificial Intelligence II: Advanced Techniques	3
	<b>CSE 5542</b>	Real-time rendering	3
	<b>CSE 5545</b>	Advanced Computer Graphics	3
	<b>CSE 5543</b>	Geometric Modeling	3
	<b>ECON 8711</b>	Microeconomic Theory IA	3
	<b>ECON 8712</b>	Microeconomic Theory IB	3
	<b>ECON 8713</b>	Microeconomic Theory IIA	3
	<b>ECON 8714</b>	Microeconomic Theory IIB	3
	<b>ECON 8721</b>	Macroeconomic Theory IA	3
	<b>ECON 8722</b>	Macroeconomic Theory IB	3
	<b>ECON 8731</b>	Econometrics I	4
	<b>ECON 8732</b>	Econometrics II	4
	<b>ECON 7700</b>	Mathematics for Economics I	3
	<b>ECON 7701</b>	Mathematics for Economics II	3
	<b>GEODSCIM 7452</b>	Spatial Geometry and Spectral Analysis	3
	<b>GEODSCIM 6451</b>	Introduction to Photogrammetry	3
	<b>GEODSCIM 7433</b>	GIS Analysis and Projects	3
	<b>GEODSCIM 6431</b>	GIS and Cartographic Engineering	3
	<b>GEODSCIM 5441</b>	Introduction to GPS: Theory and Applications	3
	<b>GEODSCIM 7442</b>	Fundamentals of GPS and Reference Systems	3
	<b>ISE 5200</b>	Mathematical Programming: Linear	3
	<b>ISE 5850</b>	Operations Research Models and Methods	3
	<b>ISE 6200</b>	Mathematical Programming: Nonlinear	3
	<b>ISE 7200</b>	Mathematical Programming: Advanced Nonlinear	3
	<b>ISE 7210</b>	Optimization Methods for Large Systems	3
	<b>MATH 2568</b>	Linear Algebra	3
	<b>MATH 4575</b>	Combinatorial Mathematics & Graph Theory	3
	<b>STAT 6450</b>	Applied Regression Analysis	3
	<b>STAT 6560</b>	Multivariate Data Analysis	3

Semester Program Proposal – PhD Attachment 2

**Transition policy**

Students who began their degree under quarters will not be penalized as we move to semesters, either in terms of progress towards their degree or their expected date of graduation. The sequence of classes is largely very flexible. We do not see the need for any bridge courses in the Geography PhD, Urban, Regional, and Global Studies Specialization; Environment and Society Specialization; Geographic Information Science – Spatial Analysis Specialization.

**Quarter Advising Sheet FINAL**

**Table A – Masters Courses**

Students will take these classes at OSU or demonstrate they have taken the equivalent elsewhere.

**1. MA Specialty Field: Environment and Society**

Environment and Society Advising Sheet MA QUARTERS			
Segment of Graduate Program (Quarters)	Quarter course name	Credit hours	Grade
<b>Required Prerequisites or Supplements</b>			
None			
<b>Required courses (5 hours)</b>			
607	Fundamentals of Geographic Information Systems	5	
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (10 hours):</b>			
683	Quantitative Geographical Methods	5	
795	Seminar in Geography	5	
800.01	Theory of Regional Development	5	
883.01	Applications I	5	
883.02	Applications II	5	
<b>2. Choice of four courses (20 hours):</b>			
605	Geography of Latin America	5	
630	Conservation of Natural Resources	5	
635	Globalization and Environment	5	
642	Geography of Development	5	
643	Newly Industrializing Countries	5	
670	Population Geography	5	
<b>3. Choice of two advanced classes (10 hours):</b>			
800.02	Problems in Regional Development	5	
830	Sem Probs Res Anal	5	
840.01	Location Theory	5	
840.02	Problems	5	
840.03	Approaches and Issues in Economic Geography	5	
845	Theory of Transportation Geography	5	
850.01	Spatial Organization of the City	5	
850.02	Urban Systems Analysis	5	
850.03	Third World Urbanization	5	
860.01	Theory of Political Geography	5	
860.02	Problems in Political Geography	5	
870.01	Theory of Population and Social Geography	5	
870.02	Problems in Population and Social Geography	5	
880	Seminars in Cartography	5	
882	The Development of Geographic Thought	5	
<b>4. One optional course (1 hour):</b>			
889	Seminars in Geography	1	
Advisor Signature and Date:			
Name:			
Graduate Major/Specialization:			

Campus ID:			
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**2. MA Specialty Field: Urban, Regional, and Global Studies**

Urban, Regional, and Global Studies MA Advising Sheet QUARTERS			
Segment of Graduate Program (Quarters)	Quarter course name	Credit hours	Grade
<b>Required Prerequisites or Supplements</b>			
None			
<b>Required courses (5 hours)</b>			
607	Fundamentals of Geographic Information Systems	5	
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (10 hours):</b>			
683	Quantitative Geographical Methods	5	
883.01	Applications I	5	
883.02	Applications II	5	
795	Seminar in Geography	5	
800.01	Theory of Regional Development		
<b>2. Choice of two broad overview courses (10 hours):</b>			
640	Economies, Space and Society	5	
650	Urban Spaces in the Global Economy	5	
655	Land Use Geography	5	
660	Conflict, Power, and Politics in the City	5	
<b>3. Choice of two specialized courses: (10 hours)</b>			
642	Geography of Development	5	
643	Geographies of Governmentalities	5	
645	Geography of Transportation	5	
647	Locational Analysis	5	
670	Population Geography	5	
<b>4. Choice of two advanced classes (10 hours)</b>			
800.02	Problems in Regional Development	5	
830	Sem Probs Res Anal	5	
840.01	Location Theory	5	
840.02	Problems	5	
840.03	Approaches and Issues in Economic Geography	5	
845	Theory of Transportation Geography	5	
850.01	Spatial Organization of the City	5	
850.02	Urban Systems Analysis	5	
850.03	Third World Urbanization	5	
860.01	Theory of Political Geography	5	
860.02	Problems in Political Geography	5	
870.01	Theory of Population and Social Geography	5	
870.02	Problems in Population and Social Geography	5	
880	Seminars in Cartography	5	
882	The Development of Geographic Thought	5	
<b>5. One optional course (1 hour)</b>			
889	Seminars in Geography	1	
<b>Total Program Hours</b>			
<b>Minimum Program Hours</b>			
Advisor Signature and Date:			
Name:			

Graduate Major/Specialization:			
Campus ID:			

### 3. MA Specialty Field: Geographic Information Systems – Spatial Analysis

GIS-Spatial Analysis MA Advising Sheet <b>QUARTERS</b>			
Segment of Graduate Program (Quarters)	Quarter course name	Credit hours	Grade
<b>Required Prerequisites or Supplements</b>			
<b>STAT 245 or equiv</b>	Introduction to Statistics	5	
<b>1. Required courses (15 hours)</b>			
<b>607</b>	Fundamentals of Geographic Information Systems	5	
<b>883.01</b>	Applications I	5	
<b>883.02</b>	Applications II	5	
<b>2. One optional course (1 hour)</b>			
<b>889</b>	Seminars in Geography	1	
<b>3. Concentrations (select one option below)</b>			
<b>3A. Concentration in Analytical Cartography (45 hours)</b>			
<b>Stat 528</b>	Data Analysis I	5	
<b>580</b>	Elements of Cartography	5	
<b>680</b>	Fundamentals of Geographic Information Systems	5	
<b>685</b>	Intermediate Geographic Information Systems	5	
<b>780</b>	Analytical Cartography	5	
<b>782</b>	Interactive Cartographic Systems	5	
<b>795A</b>	Cartography	5	
<b>795B</b>	Computer Cartography and Geographical Visualization	5	
<b>880</b>	Seminar in Cartography	5	
<b>3B. Concentration in Geographic Information Systems</b>			
<b>Required core (20 hours)</b>			
<b>685</b>	Intermediate Geographic Information Systems	5	
<b>686</b>	GIS Applications in Social Science and Business	5	
<b>687</b>	Design and Implementation of GIS	5	
<b>880</b>	Seminars in Cartography	5	
<b>Select one from the following advanced courses (5 hours)</b>			
<b>785</b>	Data Input Operations	5	
<b>787</b>	Advanced Applications in Geographic Information Systems	5	
<b>ENR 861</b>	GIS Institutions Environment and Nat Resources	5	
<b>3C. Concentration in Quantitative Methods</b>			
<b>Program of study developed in consultation with student's adviser (25 hours total)</b>			
<b>580</b>	Elements of Cartography	5	

645	Geography Transportation	5	
647	Location Analysis	5	
680	Numerical Cartography	5	
682	Independent Studies in Cartography	5	
684	Geography & Land Info Systems	5	
607	Fundamentals of GIS	5	
685	Intermediate GIS	5	
686	GIS in Social Science and Business	5	
687	Design & Implementation of GIS	5	
740	Advanced Locational Analysis	5	
787	Advanced Application in GIS	5	
840.01	Location Theory	5	
840.02	Problems	5	
840.03	Approaches and Issues in Economic Geography	5	
845	Seminars in Transportation Geography	5	
850.01	Spatial Organization of the City	5	
850.02	Urban Systems Analysis	5	
850.03	Third World Urbanization	5	
870.01	Theory of Population and Social Geography	5	
870.02	Problems in Population and Social Geography	5	
880	Seminars in Cartography	5	
882	The Development of Geographic Thought	5	
983	Special Topics in Quantitative Methods	5	
<b>BUSMGT 801.03</b>	Quant Methods in Business: Bus Data Modeling III	5	
<b>BUSMGT 901</b>	Seminar in Management Science	5	
<b>CRP 763</b>	Consequence Analysis in Urban Planning	5	
<b>CRP 775</b>	Urban Transportation Planning	5	
<b>CRP 781</b>	Spatial Models in Urban Planning	5	
<b>CIVILEN 603</b>	Remote Sensing of the Environment	5	
<b>CIVILEN 604</b>	Terrain Analysis	5	
<b>CIVILEN 606</b>	Transportation Demand Forecasting	5	
<b>CIVILEN 874</b>	Urban Transportation Network Analysis	5	
<b>CIS 516</b>	Info Systems Analysis & Design	5	
<b>CIS 541</b>	Elementary Numerical Methods	5	
<b>CIS 560</b>	Elements of Computer Systems	5	
<b>CIS 570</b>	File Design & Analysis	5	
<b>CIS 630</b>	Survey of Artificial Intelligence	5	
<b>CIS 640</b>	Numerical Analysis	5	
<b>CIS 650</b>	Information Storage and Retrieval	5	
<b>CIS 670</b>	Introduction to Database Systems	5	
<b>CIS 680</b>	Data Structures	5	
<b>CIS 681</b>	Introduction to Interactive Graphics	5	
<b>CIS 730</b>	Survey of AI II: Advanced Topics	5	
<b>CIS 781</b>	Introduction to 3-D Image Generation	5	

<b>CIS 782</b>	Advanced 3-D Image Generation	5	
<b>CIS 783</b>	Geometric Modeling	5	
<b>ECON 600</b>	Appl of Math in Economic Analysis	5	
<b>ECON 641</b>	Applied Regression & Correl Analysis	5	
<b>ECON 642</b>	Applied Econ Models and Forecasting	5	
<b>ECON 741</b>	General Linear Regression Analysis	5	
<b>ECON 742</b>	Econometrics	5	
<b>ECON 804</b>	Microeconomic Theory I	5	
<b>ECON 805</b>	Microeconomic Theory II	5	
<b>ECON 806</b>	Macroeconomic Theory I	5	
<b>ECON 816</b>	Mathematical Economics II	5	
<b>ECON 840</b>	Time Series Econometrics	5	
<b>ECON 842</b>	Advanced Econometrics	5	
<b>GEODSCIM 623</b>	Topics in Photogrammetry	5	
<b>GEODSCIM 628</b>	Elements of Analytical Photogrammetry	5	
<b>GEODSCIM 633</b>	Digital Surface Models	5	
<b>GEODSCIM 732</b>	Generalization of Topographic Maps	5	
<b>ISE 702</b>	Mathematical Programming: Linear	5	
<b>ISE 802</b>	Operations Research Models and Methods	5	
<b>ISE 831</b>	Mathematical Programming: Nonlinear	5	
<b>ISE 832</b>	Mathematical Programming: Advanced Nonlinear	5	
<b>ISE 833</b>	Optimization Methods for Large Systems	5	
<b>MATH 568</b>	Introductory Linear Algebra I	3	
<b>MATH 571</b>	Linear Algebra for Applications I	3	
<b>MATH 572</b>	Linear Algebra for Applications II	3	
<b>MATH 575</b>	Combinatorial Mathematics & Graph Theory	3	
<b>ENR 745</b>	Spatial Analysis in GIS	5	
<b>STAT 645</b>	Applied Regression Analysis	5	
<b>STAT 656</b>	Multivariate Data Analysis	5	
	Total Program Hours		
	Minimum Program Hours		
<b>Advisor Signature and Date:</b>			
<b>Name:</b>			
<b>Graduate Major/Specialization:</b>			
<b>Campus ID:</b>			

**Table B – Post-Masters Courses**

<b>Geography PhD Advising Sheet QUARTERS</b>			
<b>Segment of Graduate Program (Quarters)</b>	<b>Quarter course title</b>	<b>Credit hours</b>	<b>Grade</b>
<b>Required Prerequisites or Supplements</b>			
Proficiency of a level equivalent to MA core		45	

<b>1. Required courses (10 hours)</b>			
<b>882</b>	The Development of Geographic Thought	5	
<b>983 or equiv</b>	Special Topics in Quantitative Geography OR an advanced methods course in Geography or another unit, chosen in consultation with advisor and approved by the GSC chair.	5	
<b>2. One advanced course per year (20 hours)</b>			
<b>800.02</b>	Problems in Regional Development	5	
<b>830</b>	Sem Probs Res Anal	5	
<b>840.01</b>	Location Theory	5	
<b>840.02</b>	Problems	5	
<b>840.03</b>	Approaches and Issues in Economic Geography	5	
<b>845</b>	Theory of Transportation Geography	5	
<b>850.01</b>	Spatial Organization of the City	5	
<b>850.02</b>	Urban Systems Analysis	5	
<b>850.03</b>	Third World Urbanization	5	
<b>860.01</b>	Theory of Political Geography	5	
<b>860.02</b>	Problems in Political Geography	5	
<b>870.01</b>	Theory of Population and Social Geography	5	
<b>870.02</b>	Problems in Population and Social Geography	5	
<b>880</b>	Seminars in Cartography	5	
<b>3. One optional course (1 hour)</b>			
<b>889</b>	Seminars in Geography	1	
<b>4. Independent study and thesis courses (repeated until student reaches 135 graduate credit hours)</b>			
<b>693</b>	Individual Studies in Geography	5	
<b>999</b>	Research in Geography – Dissertation (post-candidacy)	5	
Advisor Signature and Date:			
Name:			
Graduate Major/Specialization:			
Campus ID:			



Status: PENDING

**PROGRAM REQUEST**  
Geography

Last Updated: Myers, Dena Elizabeth  
06/24/2011

**Fiscal Unit/Academic Org** Geography - D0733  
**Administering College/Academic Group** Social And Behavioral Sciences  
**Co-administering College/Academic Group**  
**Semester Conversion Designation** Converted with minimal changes to program goals and/or curricular requirements (e.g., sub-plan/specialization name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content)  
**Current Program/Plan Name** Geography  
**Proposed Program/Plan Name** Geography  
**Program/Plan Code Abbreviation** GEOG-PH  
**Current Degree Title** Doctor of Philosophy

**Credit Hour Explanation**

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program		135	90.0	50	40.0
Required credit hours offered by the unit	Minimum	130	86.7	47	39.7
	Maximum	135	90.0	50	40.0
Required credit hours offered outside of the unit	Minimum	0	0.0	0	0.0
	Maximum	5	3.3	3	0.3
Required prerequisite credit hours not included above	Minimum	45	30.0	30	0.0
	Maximum	45	30.0	30	0.0

**Explain any change in credit hours if the difference is more than 4 semester credit hours between the values listed in columns B and C for any row in the above table**

We have formalized current departmental practice, which is to require 50 semester credit hours beyond the required 30 credit hours for the MA/MS. The graduate advisor will verify that all students entering the PhD program have completed at least 30 semester hours of graduate work in their MA/MS programs.

**Program Learning Goals**

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

**Program Learning Goals** •

**Assessment**

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

**Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes**

**Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? No**

**Program Specializations/Sub-Plans**

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Status: PENDING

**PROGRAM REQUEST**  
Geography

Last Updated: Myers,Dena Elizabeth  
06/24/2011

**Pre-Major**

Does this Program have a Pre-Major? No

**Attachments**

- PhD attachment 2\_6 08\_FINAL.docx: Attachment 2  
*(Program Proposal. Owner: Pernik,Juliana Christine)*
- Division Cover Letter for Geography.doc: Division Letter  
*(Letter from the College to OAA. Owner: Mumy,Gene Elwood)*

**Comments**

**Workflow Information**

Status	User(s)	Date/Time	Step
Submitted	Pernik,Juliana Christine	05/03/2011 04:25 PM	Submitted for Approval
Revision Requested	O'Kelly,Morton Edward	05/09/2011 02:47 PM	Unit Approval
Submitted	Pernik,Juliana Christine	05/13/2011 09:03 AM	Submitted for Approval
Approved	O'Kelly,Morton Edward	05/13/2011 02:17 PM	Unit Approval
Revision Requested	Mumy,Gene Elwood	05/19/2011 10:00 AM	College Approval
Submitted	Pernik,Juliana Christine	05/24/2011 09:57 AM	Submitted for Approval
Approved	O'Kelly,Morton Edward	05/27/2011 08:43 AM	Unit Approval
Revision Requested	Mumy,Gene Elwood	06/05/2011 02:59 PM	College Approval
Submitted	Pernik,Juliana Christine	06/08/2011 10:03 AM	Submitted for Approval
Approved	O'Kelly,Morton Edward	06/20/2011 08:38 AM	Unit Approval
Approved	Mumy,Gene Elwood	06/20/2011 06:25 PM	College Approval
Approved	Myers,Dena Elizabeth	06/24/2011 01:28 PM	GradSchool Approval
Pending Approval	Cameron,Erin Marie Soave,Melissa A	06/24/2011 01:28 PM	CAA Approval



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June 8, 2011

Chairs of Arts and Sciences CCI and CAA

Dear Chairs:

At the undergraduate level the Department of Geography has six major programs:

1. Environment and Society (BA)
2. Climatology and Physical Geography Specialization (BS)
3. Spatial Analysis (BS)
4. Urban, Regional and Global Studies (BA)
5. Geographic Information Science (BS) Tagged Major, pending
6. Atmospheric Science (BS) Tagged Major, pending

Atmospheric Science and Geographic Information Science are new degrees approved early this year at the University level but have not yet been given final approval by the Board of Regents. We are fairly confident that they will receive BOR approval and Geography has presented semester transition plans with only minor changes except for a reduction of sequences in the GIS major to eliminate possible transition programs in sequenced courses.

At the time the new degrees were being developed Geography also revised the entire Geography major and its specializations. These revisions were also approved by CAA early this year so the semester conversion plans contain minimal changes.

These conversion plans were reviewed by me and the Social Sciences Disciplinary Advisory Panel (SS DAP). The SS DAP and I support Geography's conversion plans and submit them to you for CCI's consideration.

At the undergraduate level the Department also has a Geography Minor. Currently the minor requires a choice of five courses in one of four tracks. As detailed in the program rationale, students interested in the minor often have interests that cross the boundaries of the tracks leading to a host of exceptions being made to the requirement of staying in a track. As a result, the semester conversion plan allows a student to take five courses of interest in any area of Geography and Atmospheric Sciences but adds a depth requirement by adding the condition that no more than two courses can be at the 2000-level and at least one must be at the 4000-level or higher; and the program must be approved by the undergraduate advisor.

The SS DAP and I think this is a positive change to the minor and have approved it. I therefore submit it to you for CCI's approval.

At the graduate level Geography offers the following degrees:

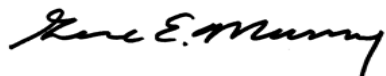
1. M.A. in Geography
2. Ph.D. in Geography
3. M.S. in Atmospheric Science
4. Ph.D. in Atmospheric Science

In his letter, Department Chair O'Kelly describes the process for converting the programs and explains that all of them are being converted with minimal changes.

The approval process for all Ph.D. and MA programs in SBS was that all of them were first examined and discussed for feedback and improvement by the SBS Graduate Committee, which is made up of the graduate directors. When ready for final consideration in the Division they move to the Social Sciences Disciplinary Advisory Panel (SS DAP).

The SS DAP has approved the Geography Ph.D. and MA programs after some changes were made. I endorse those approvals and now submit the programs to CAA and the Graduate School for their consideration.

Sincerely,

A handwritten signature in black ink that reads "Gene E. Mummy". The signature is written in a cursive, flowing style.

Gene E. Mummy  
Associate Dean of Arts and Sciences/Social and Behavioral Sciences

To: OAA

Date: 6/7/2011

Cover Letter for Proposals from the Department of Geography

This is the transmittal cover letter to the Office of Academic Affairs that reflects the efforts by the Department of Geography under Quarter to Semester Conversion.

The department used a series of committee and special purpose task forces to review programs and courses. Having recently proposed substantial revisions to our majors, we were in relatively good position to begin the Q to S process.

There has been a tremendous effort to accomplish these planned changes, with commendable input from Professor Becky Mansfield (Undergraduate), Jay Hobgood (Atmospheric Science), and Darla Munroe (Graduate). The graduate level documents are still being finalized.

The department recommends approval of these changes, which by and large are converted with minimal changes to program goals and/or curricular requirements at the undergraduate level. A recently approved set of revisions to the Majors has been incorporated into our planned semester version. *[There are minimal name changes, changes in electives and/or prerequisites, minimal changes in overall structure of program, minimal or no changes in program goals or content.]*

The graduate courses are minimally changed, but there is expected to be a complete re-write of our graduate manual to organize these classes in a way that conveys greater advisor flexibility. The department will seek appropriate approval for any substantive track or programs changes built around our existing graduate courses.

The following are the programs in the department:

a. Undergraduate bachelors degree programs and/or majors

1. Environment and Society (BA)
2. Climatology and Physical Geography Specialization (BS)
3. Spatial Analysis (BS)
4. Urban, Regional and Global Studies (BA)
5. Geographic Information Science (BS) Tagged Major, pending
6. Atmospheric Science (BS) Tagged Major, pending

b. Undergraduate minors

A minor in geography is available to any Arts and Sciences student who is not already majoring in geography.

A geography minor can be attained in any of the four specializations (1-4 above). A geography minor requires five courses from the appropriate specialization. The geography minor flier outlines the classes from which students can customize their minor in geography.

The omission of a matching minor for the two new majors (5-6 above) was a technical oversight and we plan to correct this once the majors themselves are approved. Even without that correction, a student wishing to minor in areas related to atmospheric science or geographic information science has similar options in cognate fields (items 2 & 3: Climatology and Physical Geography Specialization (BS) and Spatial Analysis (BS) respectively).

c. Undergraduate associate degree programs

n/a

d. Graduate degree programs

1. M.A. in Geography
2. Ph.D. in Geography
3. M.S. in Atmospheric Science
4. Ph.D. in Atmospheric Science

e. Graduate minors

n/a

f. Graduate certificate programs

n/a

g. Graduate interdisciplinary specializations

Graduate Interdisciplinary Specialization in Geo-Spatial Data Analysis.

Since the interdisciplinary specialization requires elements from many other degree programs, we plan to finalize these syllabi and arrangements after the initial round of graduate degree courses has been screened.

h. Professional degree programs

n/a

i. Combined programs (e.g., BS/MS, Ph.D./ MD)

n/a

For the record, no programs are being withdrawn. The details in the balance of the template are incorporated by reference, and are being revised to ensure technical compliance with the templates.

Thank you for attention to these proposals

Morton O'Kelly  
Professor & Chair  
Department of Geography

## **Program Rationale**

We have made minimal changes. The only changes for semesters is that Geog 8102 (Semesters) replaces Geog 883.01 and 883.02 (Quarters) and that there have been four name changes to seminar classes.

## **Contextual Narrative**

Geography admits students to the PhD with an MA. We do not admit directly into the PhD from Bachelor's degrees, though the expectation that students will progress to the PhD after an MA is very strongly imbedded in our admission criteria.

The PhD requires at least 50 hours post MA = 80 hours. A student coming in with an external MA can get a review to obtain 30 hours to count toward the PhD.

As a result of this structure, it is assumed that a student with an MA has already taken many intermediate and advanced classes and therefore, at the PhD level, has wide flexibility to select theory and methods courses to suit their particular research agenda, with the advice of a faculty member.

Feasible pathway: (post MA):

**year 1 18 semester hours**

**year 2 20 semester hours**

**CANDIDACY**

**year 3 6 semester hours**

**year 4 6 semester hours**

The hours in year 1 and 2 contain the two required classes, and the one advanced class each year, at a minimum. In year 2, students take remaining 2 credits through 8109 and/or 7193 or another option in consultation with their advisor.

The program is structured from a practical / common sense point of view and it is continuing the long standing practice of having the students, in consultation with an academic advisor, select specific classes.



## List of semester courses in the program

Proficiency of a level equivalent to MA core is required for the PhD program. See Appendix A for details of MA coursework.

### Post-Masters Courses

PhD Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
	Proficiency of a level equivalent to MA Core		30
<b>1. Required courses (6 hours):</b>			
	<b>8100</b>	The Development of Geographic Thought	3
	<b>8104 or equiv</b>	Special Topics in Quantitative Geography OR an advanced methods course in Geography or another unit, chosen in consultation with the adviser and approved by the GSC Chair	3
<b>2. At least one advanced course per year (12 hours):</b>			
	<b>8200</b>	Seminars in Cartography	3
	<b>8271</b>	Location Theory	3
	<b>8272</b>	Problems	3
	<b>8300</b>	Theory of Transportation Geography	3
	<b>8400</b>	Approaches and Issues in Economic Geography	3
	<b>8401</b>	Theory of Population and Social Geography	3
	<b>8402</b>	Problems in Population and Social Geography	3
	<b>8501</b>	Spatial Organization of the City	3
	<b>8502</b>	Urban Systems Analysis	3
	<b>8503</b>	Third World Urbanization	3
	<b>8601</b>	Theory of Political Geography	3
	<b>8602</b>	Problems in Political Geography	3
	<b>8800</b>	Seminar in Environment and Society	3
<b>3. One optional course (1 hour):</b>			
	<b>8109</b>	Graduate Student Professionalization	1
<b>4. Independent study and thesis courses (repeated until student reaches 50 post-masters credit hours)</b>			
	<b>7193</b>	Individual Studies in Geography	3
	<b>8999</b>	Research in Geography – Dissertation (post-candidacy)	3

## Semester Advising Sheet

### Post-Masters Courses

Geography PhD Advising Sheet SEMESTERS			
Segment of Graduate Program (Semesters)	Semester course name	Units	Grade
<b>Required Prerequisites or Supplements</b>			
Proficiency of a level equivalent to MA core		30	
<b>1. Required courses (6 hours)</b>			
<b>8100</b>	The Development of Geographic Thought	3	
<b>8104 or equivalent</b>	Special Topics in Quantitative Geography OR an advanced methods course in Geography or another unit, chosen in consultation with advisor and approved by the GSC chair.	3	
<b>2. At least one advanced course per year (12 hours)</b>			
<b>8200</b>	Seminars in Cartography	3	
<b>8271</b>	Location Theory	3	
<b>8272</b>	Problems	3	
<b>8300</b>	Theory of Transportation Geography	3	
<b>8400</b>	Approaches and Issues in Economic Geography	3	
<b>8401</b>	Theory of Population and Social Geography	3	
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<b>8503</b>	Third World Urbanization	3	
<b>8601</b>	Theory of Political Geography	3	
<b>8602</b>	Problems in Political Geography	3	
<b>8800</b>	Seminar in Environment and Society	3	
<b>3. One optional course (1 hour)</b>			
<b>8109</b>	Graduate Student Professionalization	1	
<b>4. Independent study and thesis courses (repeated until student reaches 50 post-masters credit hours)</b>			
<b>7193</b>	Individual Studies in Geography	3	
<b>8999</b>	Research in Geography – Dissertation (post candidacy)	3	
Advisor Signature and Date:			
Name:			
Graduate Major/Specialization:			
Campus ID:			

## Appendix A – Masters Advising Sheet (Semesters)

Students will take these classes at OSU or demonstrate they have taken the equivalent elsewhere.

### 1. MA Specialty Field: Environment and Society

Environment & Society Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
		None	
<b>Required courses (3 hours)</b>			
	5220	Fundamentals of Geographic Information Systems	3
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (6 hours):</b>			
	5100	Quantitative Geographical Methods	3
	7101	Research Design	3
	7102	Fieldwork in Human Geography	3
	8102	Spatial Data Analysis	3
<b>2. Choice of four courses (12 hours):</b>			
	5401	Geography of Latin America	3
	5402	Globalization and Environment	3
	5402	Land Use Geography	3
	5501	Conservation of Natural Resources	3
	5602	Geography of Development	3
	5700	Newly Industrializing Countries	3
<b>3. Choice of two advanced classes (6 hours)</b>			
	8100	The Development of Geographic Thought	3
	8200	Seminars in Cartography	3
	8271	Location Theory	3
	8272	Problems	3
	8300	Theory of Transportation Geography	3
	8400	Approaches and Issues in Economic Geography	3
	8401	Theory of Population and Social Geography	3
	8402	Problems in Population and Social Geography	3
	8501	Spatial Organization of the City	3
	8502	Urban Systems Analysis	3
	8503	Third World Urbanization	3
	8601	Theory of Political Geography	3
	8602	Problems in Political Geography	3
	8800	Seminar in Environment and Society	3
<b>4. Independent Study (3 hours)</b>			
	7193	Individual studies in Geography	3
<b>5. One optional course (1 hour)</b>			
	8109	Graduate Student Professionalization	1

### 2. MA Specialty Field: Urban, Regional, and Global Studies

Urban, Regional, and Global Studies Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
		None	
<b>Required courses (3 hours)</b>			
	<b>5220</b>	Fundamentals of Geographic Information Systems	3
<b>Electives (complete all categories):</b>			
<b>1. Choice of two of the following methods courses (6 hours):</b>			
	<b>5100</b>	Quantitative Geographical Methods	3
	<b>7101</b>	Research Design	3
	<b>7102</b>	Fieldwork in Human Geography	3
	<b>8102</b>	Spatial Data Analysis	3
<b>2. Choice of two broad overview courses (6 hours):</b>			
	<b>5401</b>	Economies, Space and Society	3
	<b>5402</b>	Land Use Geography	3
	<b>5501</b>	Urban Spaces in the Global Economy	3
	<b>5602</b>	Conflict, Power, and Politics in the City	3
<b>3. Choice of two specialized courses: (6 hours)</b>			
	<b>5271</b>	Locational Analysis	3
	<b>5300</b>	Geography of Transportation	3
	<b>5601</b>	Geographies of Governmentalities	3
	<b>5700</b>	Geography of Development	3
<b>4. Choice of two advanced classes (6 hours)</b>			
	<b>8100</b>	The Development of Geographic Thought	3
	<b>8200</b>	Seminars in Cartography	3
	<b>8271</b>	Location Theory	3
	<b>8272</b>	Problems	3
	<b>8300</b>	Theory of Transportation Geography	3
	<b>8400</b>	Approaches and Issues in Economic Geography	3
	<b>8401</b>	Theory of Population and Social Geography	3
	<b>8402</b>	Problems in Population and Social Geography	3
	<b>8501</b>	Spatial Organization of the City	3
	<b>8502</b>	Urban Systems Analysis	3
	<b>8503</b>	Third World Urbanization	3
	<b>8601</b>	Theory of Political Geography	3
	<b>8602</b>	Problems in Political Geography	3
	<b>8800</b>	Seminar in Environment and Society	3
<b>5. Independent Study (3 hours)</b>			
	<b>7193</b>	Individual Studies in Geography	3
<b>6. One optional course (1 hour)</b>			
	<b>8109</b>	Graduate Student Professionalization	1

**3. MA Specialty Field: Geographic Information Systems – Spatial Analysis**

Segment of Graduate Program (Semesters)	Semester course number	Semester course name	Units
<b>Required Prerequisites or Supplements</b>			
	Stat 2450	Introduction to Statistical Analysis	3
<b>Required courses (6 hours)</b>			
	5220	Fundamentals of Geographic Information Systems	3
	8102	Spatial Data Analysis	3
<b>One optional course (1 hour)</b>			
	8109	Graduate Student Professionalization	1
<b>Concentrations (select one option below)</b>			
<b>1. Concentration in Geographic Information Systems</b>			
<b>Required core (12 hours)</b>			
	5221	Spatial Simulation and Modeling in GIS	3
	5222	GIS Applications in Social Science and Business	3
	5223	Design and Implementation of GIS	3
	8200	Seminars in Cartography	3
<b>Select one from the following advanced courses (3 hours)</b>			
	5224	Emerging Topics in GIS	3
	6220	Advanced Applications in Geographic Information Systems	3
<b>2. Concentration in Quantitative Methods</b>			
<b>Program of study developed in consultation with student's adviser (15 hours total)</b>			
	5200	Elements of Cartography	3
	5300	Geography of Transportation	3
	5271	Locational Analysis	3
	5201	Computer Cartography and Geographical Visualization	3
	5270	Geographical Applications of Remote Sensing	3
	5220	Fundamentals of Geographic Information Systems	3
	5221	Spatial Simulation and Modeling in GIS	3
	5222	GIS Applications in Social Science and Business	3
	5223	Design and Implementation of GIS	3
	6271	Advanced Locational Analysis	3
	6220	Advanced Applications in Geographic Information Systems	3
	8271	Location Theory	3
	8272	Problems	3
	8400	Approaches and Issues in Economic Geography	3
	8300	Seminars in Transportation Geography	3
	8501	Spatial Organization of the City	3
	8502	Urban Systems Analysis	3
	8503	Third World Urbanization	3
	8401	Theory of Population and Social Geography	3
	8402	Problems in Population and Social Geography	3
	8200	Seminars in Cartography	3

	<b>8100</b>	The Development of Geographic Thought	3
	<b>8104</b>	Special Topics in Quantitative Geography	3
	<b>CRP 6700</b>	Urban Transportation Demand Forecasting	3
	<b>CRP 6800</b>	Transportation Planning	3
	<b>CRP 6600</b>	Spatial Models and Project Evaluation	3
	<b>CE 5420</b>	Remote Sensing of Environment	3
	<b>CE 7740</b>	Urban Transport Network Analysis	3
	<b>CSE 5232</b>	Software Requirements Analysis	3
	<b>CSE 5361</b>	Numerical Methods	3
	<b>CSE 4901</b>	Project: Design, Development, and Documentation of Web Applications	4
	<b>CSE 4902</b>	Project: Design, Development, and Documentation of Interactive Systems	4
	<b>CSE 4521</b>	Survey of Artificial Intelligence for non-majors	3
	<b>CSE 5241</b>	Introduction to Database Systems	3
	<b>CSE 5331</b>	Foundations II: Data Structures and Algorithms	2
	<b>CSE 5541</b>	Computer Game and Animation Techniques	2
	<b>CSE 5522</b>	Survey of Artificial Intelligence II: Advanced Techniques	3
	<b>CSE 5542</b>	Real-time rendering	3
	<b>CSE 5545</b>	Advanced Computer Graphics	3
	<b>CSE 5543</b>	Geometric Modeling	3
	<b>ECON 8711</b>	Microeconomic Theory IA	3
	<b>ECON 8712</b>	Microeconomic Theory IB	3
	<b>ECON 8713</b>	Microeconomic Theory IIA	3
	<b>ECON 8714</b>	Microeconomic Theory IIB	3
	<b>ECON 8721</b>	Macroeconomic Theory IA	3
	<b>ECON 8722</b>	Macroeconomic Theory IB	3
	<b>ECON 8731</b>	Econometrics I	4
	<b>ECON 8732</b>	Econometrics II	4
	<b>ECON 7700</b>	Mathematics for Economics I	3
	<b>ECON 7701</b>	Mathematics for Economics II	3
	<b>GEODSCIM 7452</b>	Spatial Geometry and Spectral Analysis	3
	<b>GEODSCIM 6451</b>	Introduction to Photogrammetry	3
	<b>GEODSCIM 7433</b>	GIS Analysis and Projects	3
	<b>GEODSCIM 6431</b>	GIS and Cartographic Engineering	3
	<b>GEODSCIM 5441</b>	Introduction to GPS: Theory and Applications	3
	<b>GEODSCIM 7442</b>	Fundamentals of GPS and Reference Systems	3
	<b>ISE 5200</b>	Mathematical Programming: Linear	3
	<b>ISE 5850</b>	Operations Research Models and Methods	3
	<b>ISE 6200</b>	Mathematical Programming: Nonlinear	3
	<b>ISE 7200</b>	Mathematical Programming: Advanced Nonlinear	3
	<b>ISE 7210</b>	Optimization Methods for Large Systems	3
	<b>MATH 2568</b>	Linear Algebra	3
	<b>MATH 4575</b>	Combinatorial Mathematics & Graph Theory	3
	<b>STAT 6450</b>	Applied Regression Analysis	3
	<b>STAT 6560</b>	Multivariate Data Analysis	3

### **Transition policy**

Students who began their degree under quarters will not be penalized as we move to semesters, either in terms of progress towards their degree or their expected date of graduation. The sequence of classes is largely very flexible. We do not see the need for any bridge courses in the Geography PhD, Urban, Regional, and Global Studies Specialization; Environment and Society Specialization; Geographic Information Science – Spatial Analysis Specialization.